



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,802	12/10/2004	Kevin S. Davies	04-646	8950

34704	7590	10/01/2007
BACHMAN & LAPOINTE, P.C.		
900 CHAPEL STREET		
SUITE 1201		
NEW HAVEN, CT 06510		

EXAMINER
BONK, TERESA

ART UNIT	PAPER NUMBER
3725	

MAIL DATE	DELIVERY MODE
10/01/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/517,802	Applicant(s) DAVIES, KEVIN S.	
	Examiner Teresa M. Bonk	Art Unit 3725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 14-16, 20-23, 26-31, 34-35, 42-59 is/are rejected.
- 7) ☒ Claim(s) 8-13, 17-19, 24, 25, 32, 33 and 36-41 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 14, 26, 46-47 and 53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 14, the comparison to “a part of the operator’s body” is an unknown value and therefore “the predetermined value” cannot be compared.

Regarding claim 46, the limitation “the tool” lacks antecedent basis through its dependency on claim 45, but not through claim 44.

Regarding claim 53, the limitations “the receiving size” and “the image detection device” lack antecedent basis.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 3725

3. Claims 1-2, 5-6, 20-21, 27-29, 44-46, 48-51, and 54-57 are rejected under 35 U.S.C. 102(e) as being anticipated by Lindstrom (US Patent 6,644,080), newly cited. Lindstrom discloses a safety system for use with a machine with a moving part having a laser-light emitting means (52), the axis of the emitted light being aligned to illuminate a region including at least a portion of the moving part's path movement (see Figure 4); a light receiving means (54) arranged to receive light from the emitting means, and a processing and control means (18) arranged to receive information from the light receiving means and to recognize the presence of a shadowed region within the vertical and horizontal extents of the illuminated region on the light receiving means cast by obstructions (38) in the region wherein there is sufficient information to determine the shadow's boundaries and control movement of the part.

With regards to claim 2, the control means either slows or stops the movement of the part (gripper mechanism 40) if the controls means determines the presence of an obstruction in a predetermined or calculated area of the region.

With regards to claims 5 and 6, both a single parallel beam of light (Figure 4) and an array of individual light beams (Figure 3, 5, and 6) are disclosed that create a region larger than the leading edge of the part (10).

With regards to claim 20, the light receiving means includes a charge couple device (CCD), Column 6, line 13.

With regards to claim 21, the light receiving means comprises a projection screen and image information is detect by a camera arranged to observe the image on the projection screen, Column 6, lines 58-60.

Art Unit: 3725

With regards to claim 27, a display device (60) is provided to display the images received by the light receiving means.

With regards to claims 44-46 and 54, the machine is a bending machine and the moving part could be the upper tool 10 or the lower tool/anvil 4, Column 4, lines 17-26. The moving part is arranged to bend material.

With regards to claims 55-57, the moving part is considered to be the gripper mechanism (40).

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7, 14, 22-23, 28-31, 34-35, 42-44, 46, 48-52, and 54-59 are rejected under 35 U.S.C. 102(b) as being anticipated by Fornerod et al. (US Patent 4,772,801), newly cited.

Fornerod et al. discloses a safety system for use with a machine with a moving part having a light emitting means (1) including a laser diode (5) and a transmitting end lens arrangement including a concave and aspheric lens and a lens to correct for spherical aberration (6 and 7), the axis of the emitted light being aligned to illuminate a region including at least a portion of the moving part's path movement; a light receiving means (4) including an aperture (15) arranged to receive light from the emitting means, and a processing and control means (20) arranged to receive information from the light receiving means and to recognize the presence of a shadowed region within the vertical and horizontal extents of the illuminated region on the light receiving

Art Unit: 3725

means cast by obstructions (9) in the region wherein there is sufficient information to determine the shadow's boundaries and control movement of the part (see Figure 4).

With regards to claims 2-4, the control means either slows or stops the movement of the part (tool 10) if the controls means determines the presence of an obstruction in a predetermined or calculated area of the region, Column 3, lines 22-23. The control means calculates the positions of the obstructions relative to the part and slows or stops the part dependent on the relative positions and calculates the speeds of the movement of the obstructions relative to the part and slows or stops the part dependent on the relative speeds, Column 2, line 61+ - Column 3, line 36.

With regards to claim 5, a single parallel beam of light is disclosed that create a region larger than the leading edge of the part (10).

With regards to claim 14, the control means is arranged to determine the thickness of an obstruction casting shadow in the light receiving means and allow continued movement the part, Column 37-52.

With regards to claims 22 and 23, the light emitting/receiving means are mounted to be stationary relative to the machine have the moving part (Figures 2 and 3).

With regards to claim 42, the light receiving means includes a receiving end reflector (17).

With regards to claims 44 and 46, the machine is a bending machine and the moving part is the upper tool (10). The moving part is arranged to bend material.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fornerod et al. in view of Dissey (US Patent 6,444,973). Fornerod et al discloses the invention substantially as claimed except for a light receiving and emitting means that gives a strobe effect and creates a stroboscopic images, respectively. Dissey discloses a safety system having a light receiving and emitting means to give a strobe effect and to create stroboscopic images, respectively (Abstract). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a strobe light as a light source in order to improve the overall accuracy and range of the detection apparatus (Abstract).

Allowable Subject Matter

6. Claims 8-13, 17-19, 24-25, 32-33, and 36-41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments with respect to claims 1, 2, 22, 23, 28-31, 38, and 44-52 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 3725

8. In response to the Applicant's remarks on the Dissey reference, the Examiner asserts that the Dissey reference is used as a teaching reference to show a detection apparatus with an alternative light emitting/receiving means.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO


Art Unit: 3725

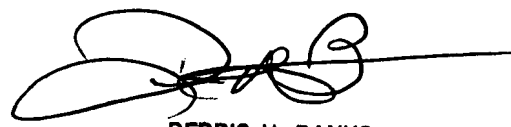
MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa M. Bonk whose telephone number is (571) 272-1901. The examiner can normally be reached on M-F 9:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Banks Derris can be reached on (571) 272-4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Teresa M. Bonk
Examiner
Art Unit 3725


DERRIS H. BANKS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700